		Pushing the Enve	elope
		2009 Mathemat	
		Academic Stand	
Nebraska Mathemat	ics		
Grade 5			
Activity/Lesson	State	Standards	
Chemistry (pgs. 25-41)	NE	MA.5.MA 5.2.5.e	Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. Measure weight (mass) and temperature using metric units
		Pushing the Enve	
		2009 Mathemat	
	_	Academic Stand	ards
Nebraska Mathemat	ics		
Grade 6			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	NE	MA.6.MA 6.2.5.c	
Chemistry (pgs. 25-			Measure volume/capacity using the metric
41)	NE	MA.6.MA 6.2.5.b	, J
Physics and Math (pgs. 43-63) Physics and Math	NE	MA.6.MA 6.3.1.a	Describe and create simple algebraic expressions (e.g., one operation, one variable) from words and tables Use a variable to describe a situation with an
(pgs. 43-63)	NE	MA.6.MA 6.3.1.b	equation (e.g., one-step, one variable)
		Pushing the Enve	
		2009 Mathemat	ics
		Academic Stand	ards
Nebraska Mathemat	ics		
Grade 7			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	NE	MA.7.MA 7.3.3.c	
Chemistry (pgs. 25-41)	NE	MA.7.MA 7.3.3.c	Given the value of the variable(s), evaluate algebraic expressions with respect to order of operations
Physics and Math (pgs. 43-63)	NE		Use a variable to describe a situation with an inequality (e.g., one-step, one variable)
Physics and Math (pgs. 43-63)	NE	MA.7.MA 7.3.3.c	Given the value of the variable(s), evaluate algebraic expressions with respect to order of operations
		Pushing the Enve	
		2009 Mathemat	
Nahaala Madaa 4	!	Academic Stand	arus
Nebraska Mathemat	ICS		
Grade 8	Otata	04	
Activity/Lesson	State	Standards	

	1		Determine surface and religions of these						
Ob			Determine surface area and volume of three-						
Chemistry (pgs. 25-	N.E		dimensional objects (e.g., rectangular prisms,						
41)	NE	MA.8.MA 8.2.5.b							
Physics and Math			Solve problems involving ratios and proportions						
(pgs. 43-63)	NE	MA.8.MA 8.1.3.e	(e.g., x/5 = 10/17)						
Physics and Math									
(pgs. 43-63)	NE	MA.8.MA 8.3.1.c	Identify constant slope from tables and graphs						
		Describing the Essential							
Pushing the Envelope									
2009 Mathematics Academic Standards									
Nebraska Mathemat	ice	Academic Stand	arus						
Grades 9-12	105								
Activity/Lesson	State	Standards							
Activity/Lesson	State	Standards	Evaluate polynomial and rational evargacions						
			Evaluate polynomial and rational expressions						
Turner of Francisco (NAA O 40 NAA	and expressions containing radicals and						
Types of Engines (NIE	MA.9-12.MA	absolute values at specified values of their						
pgs. 11-23)	NE	12.3.3.I	variables						
To a second Figure 1 and 4		NAA O 40 NAA	Derive and use the formulas for the general term						
Types of Engines (N.E	MA.9-12.MA	and summation of finite arithmetic and						
pgs. 11-23)	NE	12.3.3.m	geometric series						
Chemistry (pgs. 25-	N.E	MA.9-12.MA	Use strategies to find surface area and volume						
41)	NE	12.2.5.a	of complex objects						
			Determine surface area and volume of three-						
Chemistry (pgs. 25-		MA.9-12.MA	dimensional objects (e.g., spheres, cones,						
41)	NE	12.2.5.f	pyramids)						
			Know that the effect of a scale factor k on						
Chemistry (pgs. 25-		MA.9-12.MA	length, area and volume is to multiply each by k,						
41)	NE	12.2.5.g	k² and k³, respectively						
			Evaluate polynomial and rational expressions						
			and expressions containing radicals and						
Chemistry (pgs. 25-		MA.9-12.MA	absolute values at specified values of their						
41)	NE	12.3.3.I	variables						
			Derive and use the formulas for the general term						
Chemistry (pgs. 25-		MA.9-12.MA	and summation of finite arithmetic and						
41)	NE	12.3.3.m	geometric series						
			Represent, interpret, and analyze functions with						
			graphs, tables, and algebraic notation and						
Physics and Math		MA.9-12.MA	convert among these representations (e.g.,						
(pgs. 43-63)	NE	12.3.1.a	linear, non-linear)						
Physics and Math		MA.9-12.MA	Represent, interpret, and analyze functions and						
(pgs. 43-63)	NE	12.3.1.h	their inverses						
			Evaluate polynomial and rational expressions						
D		NAA 0 40 NA	and expressions containing radicals and						
Physics and Math	N.E	MA.9-12.MA	absolute values at specified values of their						
(pgs. 43-63)	NE	12.3.3.I	variables						
			Derive and use the formulas for the general term						
Physics and Math		MA.9-12.MA	and summation of finite arithmetic and						
(pgs. 43-63)	NE	12.3.3.m	geometric series						
Physics and Math		MA.9-12.MA	Solve an equation involving several variables for						
(pgs. 43-63)	NE	12.3.3.0	one variable in terms of the others						

			Derive and use the formulas for the general term
Rocket Activity (pgs.		MA.9-12.MA	and summation of finite arithmetic and
69-75)	NE	12.3.3.m	geometric series